

Serial No.: 10/065,413 (Docket No. U02-0003.16)

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1 (currently amended). A mobile terminal comprising:

- a radio subsystem operable to receive a radio signal;
- a ranging signal receiving subsystem for receiving digital television (DTV) signals for use as terrestrial ranging signals, a ~~terrestrial ranging DTV~~ signal comprising synchronization bursts which are equally spaced in time;
- a common filter operatively connected to the radio subsystem and the ranging signal receiving subsystem, the common filter having a bandpass that is smaller than a bandwidth of the ~~terrestrial ranging DTV~~ signal; and
- a correlation subsystem operatively connected to the common filter, the correlation subsystem operable to enable recovery of the synchronization bursts without demodulating the ~~terrestrial ranging DTV~~ signal by correlating the ~~terrestrial ranging DTV~~ signal with a known sequence that has been predistorted to account for the bandpass of the common filter.

2 (currently amended). The mobile terminal of claim 1 wherein the correlation subsystem correlates the ~~terrestrial ranging DTV~~ signal at least in part by searching a correlation window that is determined at least in part by an approximate location of the mobile terminal within a network.

3 (currently amended). The mobile terminal of claim 1 wherein the correlation subsystem correlates the ~~terrestrial ranging DTV~~ signal at least in part by performing multiple correlations at times separated by one over a known rate of occurrence of the synchronization bursts.

4 (original). The mobile terminal of claim 1 further comprising a shared mixer operatively connected to the radio subsystem and the ranging signal receiving subsystem.

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5 (original). The mobile terminal of claim 4 further comprising a shared amplifier operatively connected to the radio subsystem and the ranging signal receiving subsystem.

6 (original). The mobile terminal of claim 2 further comprising a shared mixer operatively connected to the radio subsystem and the ranging signal receiving subsystem.

7 (original). The mobile terminal of claim 6 further comprising a shared amplifier operatively connected to the radio subsystem and the ranging signal receiving subsystem.

8 (original). The mobile terminal of claim 3 further comprising a shared mixer operatively connected to the radio subsystem and the ranging signal receiving subsystem.

9 (original). The mobile terminal of claim 8 further comprising a shared amplifier operatively connected to the radio subsystem and the ranging signal receiving subsystem.

10 (currently amended). A method of processing a digital television (DTV) signal for use as a terrestrial ranging signal in a mobile terminal implementing a terrestrial ranging signal receiver, the method comprising:

receiving the ~~terrestrial ranging~~ DTV signal, the ~~terrestrial ranging~~ DTV signal comprising synchronization bursts which are equally spaced in time;

passing the ~~terrestrial ranging~~ DTV signal through a common filter having a bandpass that is smaller than the bandwidth of the ~~terrestrial ranging~~ DTV signal, but substantially equal to or greater than the bandwidth of a native radio signal; and

recovering the synchronization bursts without demodulating the ~~terrestrial ranging~~ DTV signal by correlating the ~~terrestrial ranging~~ DTV signal with a known sequence that has been predistorted to account for the bandpass of the common filter.

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11 (original). The method of claim 10, wherein the recovering of the synchronization bursts is accomplished at least in part by searching a correlation window that is determined by an approximate location of the mobile terminal within a network.

12 (original). The method of claim 10 wherein the recovering of the synchronization bursts is accomplished at least in part by performing multiple correlations at times separated by one over a known rate of occurrence of the synchronization bursts.

13 (currently amended). Apparatus providing mobile terminal function and terrestrial ranging signal function, the apparatus comprising:

means for receiving digital television (DTV) signal for use as a terrestrial ranging signal, the ~~terrestrial-ranging DTV~~ signal comprising synchronization bursts which are equally spaced in time;

means for passing the ~~terrestrial-ranging DTV~~ signal through a common filter having a bandpass that is smaller than the bandwidth of the ~~terrestrial-ranging DTV~~ signal, but substantially equal to or greater than the bandwidth of a native radio signal; and

means for recovering the synchronization bursts without demodulating the ~~terrestrial-ranging DTV~~ signal by correlating the ~~terrestrial-ranging DTV~~ signal with a known sequence that has been predistorted to account for the bandpass of the common filter.

14 (original). The apparatus of claim 13 wherein the means for recovering further comprises means for searching a correlation window that is determined by an approximate location of the mobile terminal within a network.

15 (original). The apparatus of claim 13 wherein the means for recovering further comprises means for performing multiple correlations at times separated by one over a known rate of occurrence of the synchronization bursts.